

Morgan County

Municipal Solid Waste Planning Region

2006 Qualitative Review



Tennessee Department of Environment and Conservation
Division of Solid Waste Management
Solid Waste Assistance Programs
401 Church Street, 5th Floor
Nashville, Tennessee 37243

Introduction

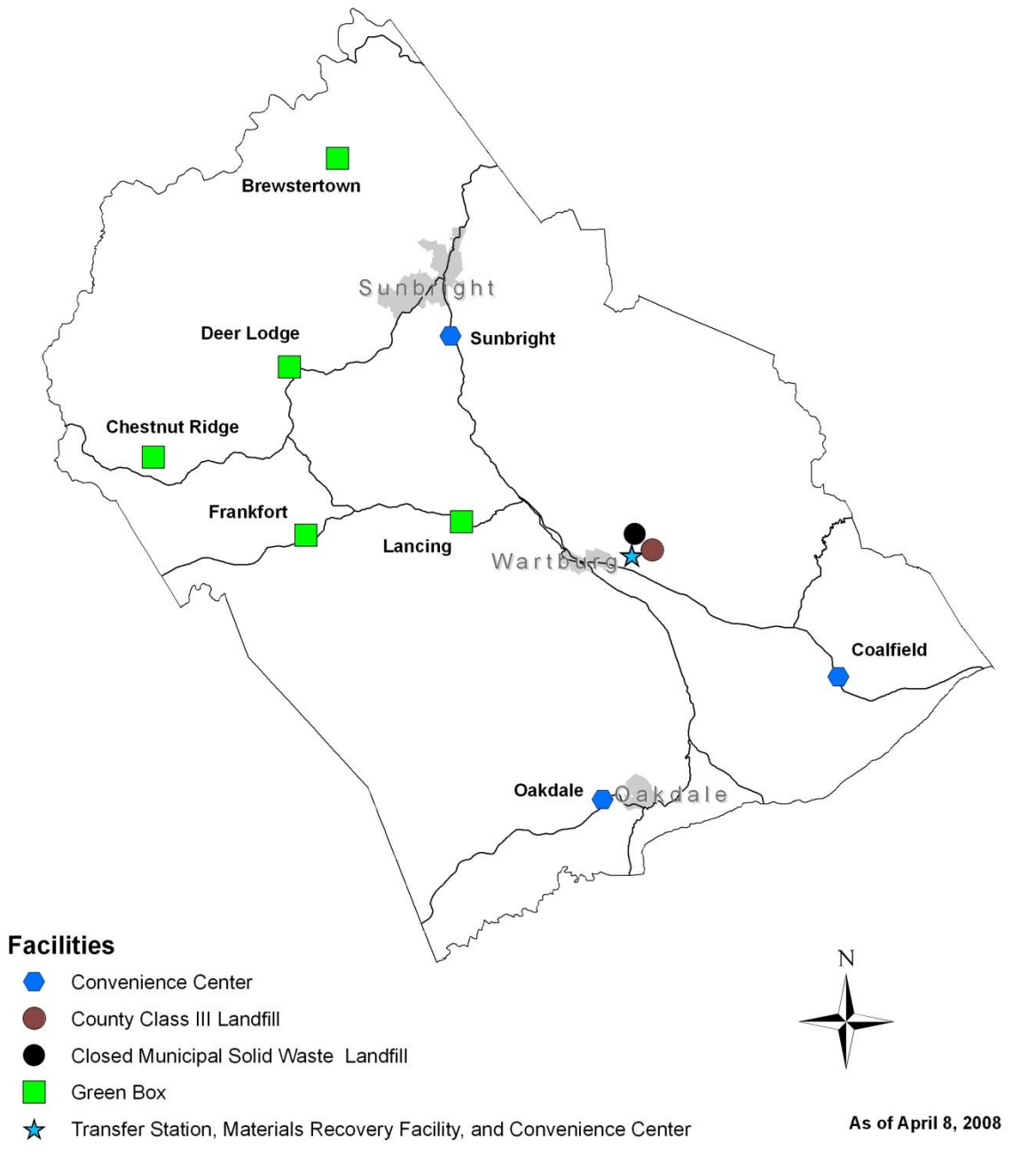
Tennessee's *Solid Waste Management Act of 1991* (SWMA) requires solid waste regions to achieve a twenty-five percent (25%) waste reduction goal for solid waste going into Class I landfills by December 31, 2003. Under TCA § 68-211-861, the basis for determining compliance with this waste reduction goal is based on a per capita reduction measurement that may be adjusted for economic or population trends, or by a qualitative assessment that evaluates whether the region had comparable progress to those of similar regions that made the waste reduction goal based on the per capita methodology. Until 2003 the need to define the qualitative assessment was not necessary since there were no regions out of compliance. After the 2003 reporting period, 34 regions failed to meet the 25% waste reduction goal, which necessitated the promulgation of rules describing the methodology for qualitative assessment of regions failing to meet the per capita base year reduction. These rules became effective August 6, 2006.

The first step in the qualitative assessment process is to determine if the failing region met the waste reduction goal using the real-time methodology. This method is calculated annually by dividing the total amount recycled or diverted from Class I landfills by the total generated waste stream. If the region did not meet the 25% goal through this process, the region is then reviewed in order to determine if a "good faith" effort was made toward compliance and if their programs and solid waste infrastructure are qualitatively equivalent to like regions of similar population and economic characteristics who have achieved the goal.

In 2006, five regions failed to meet the goal by either base year or real-time methods. With a base year reduction of 6% and a real-time comparison of 23%, Morgan County was one of those regions. Morgan County Municipal Solid Waste Planning Region, along with the four other regions who failed to meet the goal, were compared to regions who met the goal on a base year (per capita) method in 2006 and who have similar population size and economic characteristics. Comparison regions included Cocke, Grainger, Hardeman, Humphreys, Lawrence, Lewis and Van Buren.

On April 8, 2008, Wayne Brashear, Bob Knight, Nick Lytle and Matt Maynard, from the Division of Solid Waste Management, visited with Morgan County Mayor Becky Ruppe, Solid Waste Director Leamon Woods, Recycling Coordinator Eric Andelman, Oakdale Mayor Vic Jeffers, Sunbright Mayor Dennis Reagan and Wartburg Mayor Joey Williams to discuss all facets of the region's solid waste management programs. Visits were made to the four convenience centers, the five county public collection receptacle or "green box" sites, the transfer station, the Class III/IV landfill and the materials recovery facility (MRF). The equipment and facilities at each of those sites were examined and noted. Future facility and equipment needs for the programs were reviewed by staff at the time of visit and financial statements were obtained from the county and the municipalities.

Morgan County Solid Waste System



Solid Waste Facilities and Infrastructure

Every county in Tennessee is required by law to provide both a minimum level of waste reduction and also waste collection assurance. The solid waste and recycling collection programs of the Morgan County Solid Waste Planning Region serve a population of 20,365 and an area of 522 square miles. The minimum number of convenience center sites required by state statute, based on Morgan County's population, is calculated at one site. The region satisfies these requirements through the following systems:

Morgan County operates four convenience centers located in the Wartburg, Sunbright, Coalfield and Oakdale communities. Each location utilizes municipal solid waste compactors with receiver boxes to collect waste from the public. After collection and compaction the municipal solid waste is taken to the county's transfer station for consolidation and transportation to Volunteer Landfill located in Scott County. Corrugated cardboard (OCC), scrap metal, aluminum cans and used oil are accepted at all the convenience centers. OCC is collected in metal pens atop of trailers which are hauled back to the MRF for processing. Mixed metals are placed on the ground in designated areas and collected by a local scrap dealer. The dealer is awarded an annual contract with the condition that he provides for all the collection and transportation of the material. In turn, the dealer keeps the profits from the sale of the material. Aluminum cans were collected in small receptacles and transported to the MRF for baling. Used oil is collected in TDEC funded tanks and serviced by a contractor when full.



Coalfield Convenience Center

The remainder of the county is covered by five public collection or “green box” sites which are fenced and manned during hours of operation. These sites are located in the Brewstertown, Deer Lodge, Chestnut Ridge, Lancing and Frankford communities. Each

of the sites provides for collection of municipal solid waste through the use of front-end loader boxes. Each site provides for OCC, mixed metals and aluminum can recycling. All sites were fenced and manned with signage stating policies and operating hours. Information on regulations concerning “green box” sites and permitting of convenience centers can be found in the “Recommendations” section of this report.

The City of Sunbright provides curbside waste collection for its residents through a city-owned and operated program consisting of one employee and a truck. Sunbright’s maintenance garage collects and burns used oil for heat. The City of Oakdale contracts with Evergreen Environmental Services for curbside waste collection for its city residents with the cost for this service included in the city’s property tax. The City of Wartburg provides curbside waste collection to its residents through the use of a city-owned and operated truck with two full-time employees. Wartburg also has a seasonal chipper and yard waste collection service.



Baled OCC at MRF

In addition to the public collection facilities, the county operates a materials recovery facility (MRF) in conjunction with the convenience center and transfer station located in Wartburg. This facility is conveniently located for the processing of materials from all areas of the county. The MRF houses a single vertical baler used primarily to bale OCC, as well as a small amount of aluminum cans. Bales are stored outside until a full load is assembled for market. According to the 2006 APR, the MRF processed the following materials collected within the Region:

- 272 Tons Corrugated Cardboard
- 10 Tons Newspaper
- 62 Tons Other Paper

Assuming 264 working days in a year, the MRF processed 1.3 tons per day during calendar year 2006.

The County Solid Waste Department employs a full time solid waste director and a recycling coordinator. By employing both a solid waste director and a recycling coordinator, Morgan County is able to have a greater level of management over the day-to-day operations of all aspects of their solid waste systems. Direct oversight of routes, collection schedules, materials marketing and public education allows the program to operate more efficiently and aids in financial stability. The municipalities in the region that provide for residential solid waste collection are managed by the public works departments without a dedicated solid waste director.

Financial Information

T.C.A. § 68-211-874(a) states that each county, solid waste authority and municipality shall account for financial activities related to the management of solid waste in either a special revenue fund or an enterprise fund established expressly for that purpose. The solid waste financial information of Morgan County was examined by department staff. From a solid waste system management standpoint, the expenditures and revenues were found to be in line with state mandates. Morgan County's solid waste revenues and expenditures were found to be financially solvent. While revenues did exceed expenditures in the year reviewed, the county maintains a large balance in the fund from one year to the next.

Summary of Fiscal Year 2007 Solid Waste Special Revenue Fund

Expenditures

Solid Waste Management	\$78,207
Solid Waste Education	\$29,714
Waste Pickup	\$477,959
Convenience Centers/"Green Boxes"	\$212,911
Landfill Operation & Maintenance	\$100,412
Recycling Center	\$69,416
Other	\$16,210

Total	\$984,829
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Revenues

Local Taxes	\$714,611
Charges for Services	\$187,313
Other Revenues (Including Sale of Recyclables)	\$25,253
State of Tennessee (Grants)	\$53,189

Total	\$980,366
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Solid Waste Planning Board

The Solid Waste Management Act states that every municipal solid waste planning region in the state must appoint a solid waste planning board, composed of representatives of each county and each city that participates in a solid waste program. The Municipal Solid Waste Planning Region Board is tasked with accurately reviewing and approving annual progress reports. Also they are instrumental in approving any new solid waste permits for the region. At a minimum, having an active board that meets with regularity is vital to complete these tasks. The Planning Board is also needed to develop ten year plans, assess disposal capacity and collection assurance, provide for solid waste education, and assist in other aspects of integrated solid waste management. Duties and powers of the solid waste planning board are spelled out in T.C.A. §§ 68-211-813 thru 815.

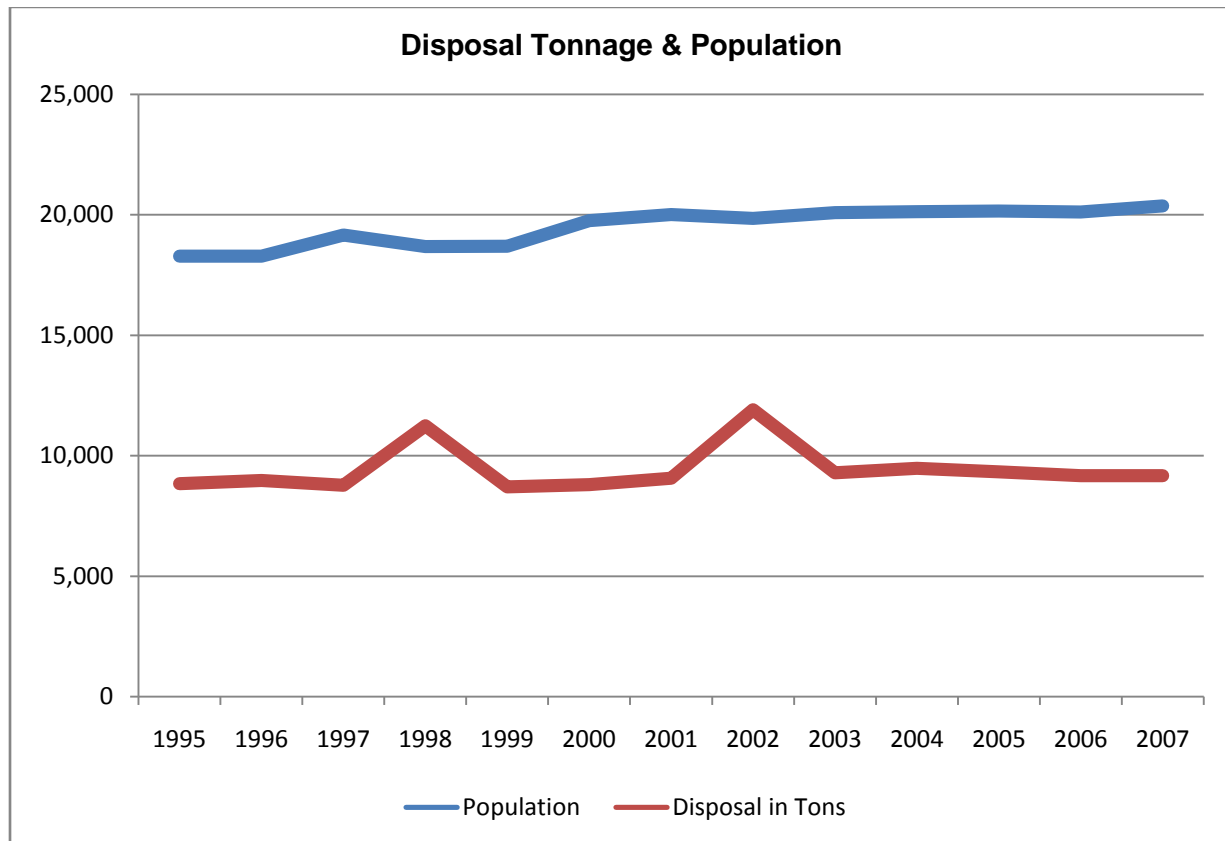
According to Morgan County Mayor Becky Ruppe, the municipal solid waste planning board meets at least quarterly to consider solid waste activities of the region.



Morgan County Convenience & Recycling Center

Map & Statistics

Year	Population	Disposal	Tons Per Capita
1995	18,280	8,838	0.48
1996	18,280	8,959	0.49
1997	19,159	8,766	0.46
1998	18,675	11,234	0.60
1999	18,689	8,700	0.47
2000	19,757	8,790	0.44
2001	20,003	9,059	0.45
2002	19,847	11,901	0.60
2003	20,080	9,284	0.46
2004	20,132	9,464	0.47
2005	20,157	9,320	0.46
2006	20,108	9,164	0.46



Analysis of local conditions

Historically, Morgan County's reported Class I landfill disposal tonnages listed in the Annual Progress Reports (APR) have been consistently lower than the state average. In 1995, the State of Tennessee averaged 1.3 tons of municipal solid waste placed into Class I landfills per capita. In contrast, the Morgan County Municipal Solid Waste Region reported 8,838 tons of waste going into Class I landfills, or 0.48 tons per person. A 25% reduction of this value would require a disposal rate of 0.36 tons per person per year. Morgan County's reported annual disposal history has shown very little variation during the past 13 years, with a high of 11,901 tons to a low of 8,700 tons.

Other counties in the state that utilized "green boxes" as a method of providing public waste collection have seen abnormally high waste collection rates at these sites associated with a lack of monitoring and a lack recycling opportunities. However, there is no indication that this is a problem with Morgan County's "green boxes" as they are all fenced, monitored, and offer recycling opportunities much like permitted convenience centers.

In 2006, Morgan County Municipal Solid Waste Planning Region reported only residential and institutional recycling tonnage in the APR and did not provide any commercial or industrial recycling numbers. The Real-Time comparison method for measuring waste reduction is calculated by comparing all documented recycling and waste diversion programs against Class I landfill disposal. Therefore, the more documented recycling programs present in the region, the higher the Real-Time measurement. The 2006 APR reported 9,164 tons of Class I disposal and 11,864 tons total generation, which computes to a 22.8% Real Time reduction. In 2006, an additional 355 tons of reduction would have been required with the reported disposal rate for the county to achieve a 25% reduction through the Real-Time comparison method.

Currently, Morgan County's only large scale recycling program is corrugated cardboard and scrap metals. The lack of other recycling opportunities such as mixed paper, plastics and other commodities make future substantial increases in the county's recycling rate difficult.

Recent Annual Progress Reports submitted to TDEC indicate a low amount of business and commercial recycling operations. This might be due to a lack of these businesses conducting recycling operations or a lack of reporting. Any increase in the amount of private recycling operations would positively affect the regions Real-Time reduction rate.

Morgan County currently burns clean brush and wood waste near the Class III landfill site. By doing this, the county prevents the material from being landfilled; however, mulching or a similar reuse of this material would be more environmentally sustainable, and contribute positively to the county's waste reduction rate.

Data collected in the county is currently being reported by a number of entities. The local development district is handling reporting for the Annual Progress Report. Metal scrap is being reported to the county by the collector who gathers it from the convenience centers and “green boxes”. By not gathering and reporting their own data to the state, the accuracy and validity of some of the numbers comes into question.

The municipalities of Wartburg, Sunbright and Oakdale provide only curbside residential waste collection without providing recycling or waste reduction options. Citizens, who are serviced by curbside waste pickup without curbside recycling, are less likely to segregate commodities for transportation to county recycling drop off locations.



Transfer Station

Recommendations for improvement

The Morgan County Municipal Solid Waste Planning Region fell short of meeting the waste reduction goal in 2003 and in 2006 which lead to this qualitative assessment. However, prior to the completion of this qualitative assessment, this region submitted its 2007 Annual Progress Report showing an increase to its real-time reduction rate from 23% in 2006 to 26% in 2007. Even so, the following are areas that the county should consider in moving forward:

- Reevaluate collection, transportation, and storage infrastructure for the recycling program.
 - Shelter materials collected from the elements to limit contamination and to increase the market value of the commodities.
 - Provide additional covered storage space to benefit the housing and processing of commodity materials.

- Standardize and better organize collection containers at the convenience center to protect commodities and improve the collection program for the public, thus increasing participation and support.
 - Review the scrap metals recycling program to determine the viability of county-controlled collection and marketing of commodities due to the value of this material.
 - Work with available technical assistance such as the East Tennessee Development District, University of Tennessee County Technical Assistance Services, Recycling Marketing Cooperative of Tennessee and TDEC for help or guidance in adopting best management practices and modifications to the existing programs.
- Expand the scope of the existing recycling program to include other commodities in addition to scrap metal and corrugated cardboard. A phased-in sorted office paper, newsprint, and mixed paper recycling program would bring the best return on efforts.
- Implement programs that increase the public's awareness of all solid waste collection sites and their recycling opportunities. TDEC's technical assistant providers can assist with these efforts to provide an approach that reaches all age groups.
- Develop strategies that will train staff to appropriately direct the public to proper recycling and disposal options at the various points of collection.
- Work with local business and industry to identify, capture and collect available corrugated cardboard, sorted and mixed office paper from these high volume generators.
- Seek to implement higher level wood waste management programs such as mulching and composting to minimize or replace existing burning policy.
- Work with local schools and institutions to increase source separation of high value commodities such as paper products, food and beverage containers that will expand and improve existing recycling efforts.
- Take greater efforts in collecting and accurately reporting information concerning recycling activities and disposal to provide proper accounting of all waste reduction programs going on in the county.

Conclusion

T.C.A. § 68-211-861 requires each municipal solid waste planning region to achieve a twenty-five percent (25%) waste reduction goal for solid waste going to Class I landfills by December 31, 2003. Based on Morgan County solid waste planning region's

reported Class I disposal and tons diverted, the region failed to meet the required reduction goal for calendar year 2006. This failure caused the Department to qualitatively assess Morgan County's Solid Waste Planning Region's solid waste reduction program's activities and expenditures to determine if it was qualitatively equivalent to other comparative counties that did reach the waste reduction goal.

Morgan County Municipal Solid Waste Planning Region possesses programs, finances, infrastructure, education and staffing consistent with comparison regions. After full review of the Morgan County Municipal Solid Waste Planning Region, it has been determined that the region and its local governments are qualitatively equivalent to like regions and are making a good faith effort towards waste reduction.